PTO/SB/51 (06-03)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Docket Number (Optional)

REISSUE APPLICATION DECLARATION BY THE INVENTOR

FI-9-97-207 US2
I hereby declare that: Each inventor's residence, mailing address and citizenship are stated below next to their name. I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 6,297,140 , granted October 2, 2001 , and for which a reissue patent is sought on the invention entitled
METHOD TO PLATE C4 TO COPPER STUD
the specification of which
X is attached hereto.
was filed on as reissue application number
and was amended on (if applicable)
(ii applicatio)
I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.
I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/2B (or equivalent) listing the foreign applications.
I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)
by reason of a defective specification or drawing.
by reason of the patentee claiming more or less than he had the right to claim in the patent.
by reason of other errors.
At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:
The patentee claimed less than he had the right to claim in not including claims along the lines of newly-presented claims 24-43. This is a broadened reissue. The broadening is directed to not reciting "depositing a photoresist layer over said plating seed layer" and "remaining portions of said photoresist layer" and "removing photoresist remaining in said at least one recess "contained in Claim 1 and claims dependent therein or not reciting "providing a pad in said at least one recess for preventing removal of portions of said seed layer in said at least one recess" and "removing said pad" included in Claim 22 and claims dependent thereon. Not requiring the above features is supported by the original patent. For instance, although these features relate to referred aspects of the invention in order to assure the preventing of dishing of the seed layer in the depression, they are not mandatory. In particular, the disclosure at column 6, lines 3-4 and 42-44 disclose the optional nature of these embodiments.
For instance, column 6, lines 3-4 state:
"After formation of the seed layer, a photoresist may be deposited over the seed layer."
(cont'd on page 2)

(cont'd from page 1)	
Column 6, lines 42-44 state:	
"According to an alternative embodiment, photoresist may not be utilized. Since an embodiment may a very hard pad to prevent dishing of the seed layer in the depression."	/ utilize
The use of the term "may" with the above statements is a clear appreciation and recognition that the is being practiced without employing these steps. This is further supported by column 6, line 53 that states	method
"After removal of the resist, if necessary"	
The patentee also claimed less than he had the right to claim in not including claims 44-62 that ultimate depend from claim 22. These claims generally correspond to claim 2-12 and 14-21 respectively except that the ultimately depend upon claim 22 rather than ultimately from Claim 1. Claim 54 further differs from Claim 12 in reciting the "photoresist layer."	ev
Claims 1, 16, 20, 22 and 23 have also been amended by deleting the phrase "the steps of" or "the ste which seems superfluous.	ep of"

Docket Number (Optional) (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 3) FI-9-97-207US2 All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith. Registration Registration Name(s) Number Name(s) Number Correspondence Address: Direct all communications about the application to: **Customer Number** Customer Number OR Firm or х Burton A. Amernick Connolly Bove Lodge & Hutz LLP Address 1990 M Street, NW, Suite 800 City Washington DC Zip 20036 State Telephone 202-331-7111 Fax 202-293-6229 Country I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed. Full name of sole or first inventor (given name, family name) Cyprian Emeka Uzoh Inventor's signature Cypycan Date 9 20 03 Residence Citizenship 1645 McCandless Drive, Milpitas, CA 95035 Nigerian Mailing Address Full name of second joint inventor (given name, family name) Daniel C. Edelstein Inventor's signature Date Citizenship Residence 15 Gramercy Place, New Rochelle, New York 10801 US Mailing Address 15 Gramercy Place, New Rochelle, New York 10801 Full name of third joint inventor (given name, family name) Date Inventor's signature Residence Citizenship Mailing Address Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.

PTO/S8/51 (08-03)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent end Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless a displays a valid OMB control number.

DELOCAL AND LATION DEGLADATION BY THE INVENTOR	Docket Number (Optional)							
REISSUE APPLICATION DECLARATION BY THE INVENTOR	FI-9-97-207 U\$2							
I hereby declare that: Each inventor's residence, mailing address and citizenship are stated below next to their name. I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 6,297,140 , granted October 2, 2001 , and for which a reissue patent is sought on the invention entitled								
METHOD TO PLATE C4 TO COPPER STUD								
the specification of which								
is attached hereto. was filed on as relssue application num and was amended on	ber							
(If applicable)								
I have reviewed and understand the contents of the above Identified specifics as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentabil 37 CFR 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (PTO/SB/2B (or equivalent) listing the foreign applications. I verily believe the original patent to be wholly or partly inoperative or invalid, below. (Check all boxes that apply.) by reason of a defective specification or drawing. X by reason of the patentee claiming more or less than he had the right	ity as defined in i), or 365(b). Attached is form for the reasons described							
by reason of other errors.								
At least one error upon which reissue is based is described below. If the reis reissue, such must be stated with an explanation as to the nature of the broat	sue is a broadening dening:							
The patentee claimed less than he had the right to claim in not including clair claims 24-43. This is a broadened reissue. The broadening is directed to no layer over said plating seed layer" and "remaining portions of said photoresis remaining in said at least one recess "contained in Claim 1 and claims depend a pad in said at least one recess for preventing removal of portions of said set and "removing said pad" included in Claim 22 and claims dependent thereon supported by the original patent. For instance, although these features relate in order to assure the preventing of dishing of the seed layer in the depression particular, the disclosure at column 6, lines 3-4 and 42-44 disclose the option	t reciting "depositing a photoresist tayer" and "removing photoresist dent therein or not reciting "providing the layer in sald at least one recess". Not requiring the above features is to referred aspects of the invention in, they are not mandatory. In							
For instance, column 6, lines 3-4 state:								
"After formation of the seed layer, a photoresist may be deposited over the	e seed layer."							
(cont'd on page 2)								

(cont'd from page 1)

Column 6, lines 42-44 state:

"According to an alternative embodiment, photoresist may not be utilized. Since an embodiment may utilize a very hard pad to prevent dishing of the seed layer in the depression."

The use of the term "may" with the above statements is a clear appreciation and recognition that the method is being practiced without employing these steps. This is further supported by column 6, line 53 that states

"After removal of the resist, if necessary . . ."

The patentee also claimed less than he had the right to claim in not including claims 44-62 that ultimately depend from claim 22. These claims generally correspond to claim 2-12 and 14-21 respectively except that they ultimately depend upon claim 22 rather than ultimately from Claim 1. Claim 54 further differs from Claim 12 in not reciting the "photoresist layer."

Claims 1, 16, 20, 22 and 23 have also been amended by deleting the phrase "the steps of" or "the step of" which seems superfluous.

SEP 29 '03 11:17 2022936229 PAGE.03

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 3) Docket Number (Of FI-9-97-207)									
All errors corrected in this reissue application arose without any deceptive Intention on the part of the applicant. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith.									
	Registration				Registration	7			
Name(s)	Number	N	ame(s)		Number	1			
			····						
Correspondence Address: Direct all	communication	ns about the ap	oplication to:						
Customer Number									
	Customer I	Number				1			
OR									
Firm or Individual Name Burton A. Amernia	ck								
Address Connolly Bove Lodge & Hut									
1990 M Street, NW, Suite 8 City Washington	State	DC		Ζiρ	20036				
Country	Telephone	202-331-71	11	Fax	202-293-6229				
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed. Full name of sole or first inventor (given name, family name)									
Cyprian Emeka Uzoh Inventor's signature			Date						
Residence			Citizenship						
1645 McCandless Drive, Milpitas, C. Mailing Address	A 93035		Nigerian						
Full name of second joint inventor (given	name, family n	ame)		•					
Daniel C. Edelstein	, <u> </u>		Date	,					
Inventor's signature	ile		9/	29/	03				
Residence 15 Charlotte Street, White Plains, New York 10606			Citizenship US						
Mailing Address 15 Charlotte Street, White Plains, Ne	w York 1060								
Full name of third joint inventor (given na					· · · · · · · · · · · · · · · · · · ·				
Inventor's signature			Date	-					
Residence			Citizenship						
Mailing Address				-					
Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached horoto.									